Solvothermal method coupled with thermal decomposition for synthesis of non-stoichiometric $BiO_{1.18}I_{0.64}$ with excellent photocatalytic activity

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Figure S1. TG/DTG profile of BiOI-(400 °C/5 h).



Figure S2. (a) Photocatalytic activities of BiOI-(200 $^{\circ}$ C, 300 $^{\circ}$ C, 400 $^{\circ}$ C, 500 $^{\circ}$ C and 600 $^{\circ}$ C/5 h) for aniline degradation under light irradiation; (b) Degradation rate of

aniline over the photocatalysts after 3 h with light irradiation.



Figure S3. Five recycling runs of BiOI-(400 $^{\circ}C/5$ h) for the degradation of aniline.



Figure S4. XRD patterns of fresh BiOI-(400 °C/5 h) and BiOI-(400 °C/5 h) after 5 recycling runs.



Figure S5. Photocatalytic activity of BiOI-(400 °C/5 h) for the degradation of aniline with different quenchers under light irradiation.



Figure S6. Photocatalytic degradation mechanism of aniline over BiOI-(400 $^{\circ}C/5$ h).